

PHENIX WEEKLY PLANNING

TECHNICAL
SUPPORT
2011



7/21/2011
Don Lynch

This Week

- MuTr Vacuum lifting test re-certification
- Continue Prep EC for move to AH,
- Move EC to AH
- Move Collars to AH
- Install Aluminum plates
- Continue disassembling VTX
- FVTX fixture assembly
- Prep for RPC1 Prototype & RPC1 Prototype Absorber removal
- RPC1, VTX, FVTX and MuTr work prep
- Install new 1 ton cranes in IRMove EC to Hall
- MuTr Stations 1,2,3 and BBC work permits
- RPC1, VTX, FVTX and MuTr work prep

Next Week

- Remove VTX and send to Chem lab for repairs/upgrades
- FVTX assembly
- BBC south removal
- Remove north section of Bridge platform
- Remove MMS east vertical lampshade
- Remove RPC1 Prototype & RPC1 Prototype Absorber
- RPC1, VTX, FVTX and MuTr work prep
- Install new 1 ton cranes in IRMove EC to Hall
- RPC1 Work permit
- RPC1, VTX, FVTX and MuTr work prep
- Procure manlift and station 1 scaffolding

TECHNICAL SUPPORT 2011

Planning For the 2011 Shutdown

TECHNICAL SUPPORT ZONE

• Shutdown Standard Tasks	Done
• Open wall, disassemble wall, Remove MuID Collars,	
• Move EC to AH, etc.	
• IR Crane repairs and upgrade	7/21-7/28
• Disassemble VTX services	7/11-7/22
• Remove VTX and transport to Chemistry Lab	7/25/2011
• BBC North & South maintenance	7/22-7/29/2011
• MuTr North Station 1 work	
• Install access (Sta. 1 work platforms & CM west side hanging platform)	7/25-8/5/2011
• Remove 1 section of bridge (1 week) (CAD Techs)	8/1-8/5/2011
• Disconnect Cables, hoses etc, ID/label all (1 week)	8/8-8/12/2011
• Remove FEE plates and chambers (1 week)	8/15-8/19/2011
• Station 2 Maintenance/upgrade through access opened by station 1 removal (3 weeks concurrent with next task)	8/22/-9/9/2011
• Clean/install new parts and upgrades (MuTr (3 weeks, concurrent At RPC Factory)	8/22/-9/9/2011
• Re-install chambers and FEE plates (1 week)	9/12-9/16/2011
• Re-cable, re-hose and test (3 weeks)	9/19-10/7/2011

Planning For the 2011 Shutdown (cont'd)

TECHNICAL SUPPORT ZONE

- MuTr North& South Station 2 & 3 Re-cap clamps (No internal work platforms to upper octants) (Need CAD Techs to remove MMS east vertical lampshade) 7/25-10/31/2011
- VTX maintenance/upgrade and integration of FVTX onto VTX support structure
 - Build 2 FVTX racks 7/1-9/15/2011
 - Disassemble VTX 7/11-7/25/2011
 - repair/upgrade/test/reassemble/resurvey VTX 7/25-9/30/2011
 - Assemble FVTX, presurvey Present-10/3/2011
 - Integrate FVTX into VTX, final internal survey 10/3-10/14/2011
 - Install VTX/FTX, Re-connect VTX services, Install FVTX services, survey and QA tests 10/17-10/28/2011
 - VTX/FVTX Commissioning 10/31-11/30/2001
- RPC1 upgrades 7/25-10/28/2011
 - Pre-survey RPC1's at factory (2 weeks, 1 each for n & s) 7/25-8/12/2011
 - Build 1 new rack, upgrade existing RPC1 prototype rack 7/25-8/12/2011
 - Install north RPC1 (including north rack) (3 weeks) 8/15-9/2/2011
- RPC3 HV Distribution modifications, gas distribution modifications, PS calibration 9/6-10/7
- Move Station 1 work platforms to south station 1 10/10-10/14/2011
 - Install south RPC1 (including south rack) (3 weeks) 10/17-11/4/2011
- Upgrade AH crane 8/15-9/15/2011
- DC/PC1 East troubleshooting (DC moved forward on rail for access) 10/15-11/15/2011
- Install VTX&FVTX (including installation of 2 racks on bridge) (2 weeks) 9/26-11/7/2011
- Undefined detector subsystem maintenance and repairs 7/25-11/7/2011
- Prep for EC roll in, reinstall MMS lampshade 11/3-11/7/2011
- Roll in EC 11/10/2011
- Prep IR for run 11/10-11/17/2010
- VTX, FVTX and RPC1 Services and commissioning (including 4 new racks) 9/16-11/30/201
- Pink/Blue/White sheets 11/17-11/30/2011
- Run 12 cooldown 12/1/2011

7/21/2011

Electronics Group 2011 Shutdown Tasks

TECHNICAL SUPPORT 2011

- CMT4 and CMT5 FVTX rack design and assembly for installation on the bridge. *Design in progress.*
- FVTX Bias cable assemblies.
 48 eight pair #22AWG. 1680 ft total.
 384 RG-174 cables terminated with CPC and MMCX R/A conns. 1500 ft total.
 All parts are on order. Drawing finished and out for bid. .
- Purchase and install FVTX LV cables.
 Wedges: 96 eight pair #22AWG terminated in DF11 conns. 3400 ft total.
 ROCs: 24 twelve pair #16AWG terminated in TYCO 2-106527-4 conns. 900ft total.
 Cable is on order.
- All FVTX fiberoptics specify, purchase and install.
 MTP trunk order entered. Slow Controls fiber and patch bay order entered .
- FVTX LV output mapper boards. *Eric Mannel is designing and we will assemble.*
- PbSc terminator board production. *Part kit has been picked up. Terminators expected by 6/22.*
 MuTr capacitors are here
- West carriage ADAM system performance upgrade.
 Purchased a couple of Ethernet ADAMs for testing. Need to purchase a MODBUS server.
- Complete the GL1 6X1 Multiplexer assemblies and test. *Layout stage begun .*
- LeCroy HV control retrofit testing. *Waiting for documentation from Debrecen Institute.*
- Design/Install FVTX Interlock system.
 Paul with some input from me and John. Also we may try to repair the bad TC connections.

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TECHNICAL SUPPORT



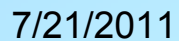
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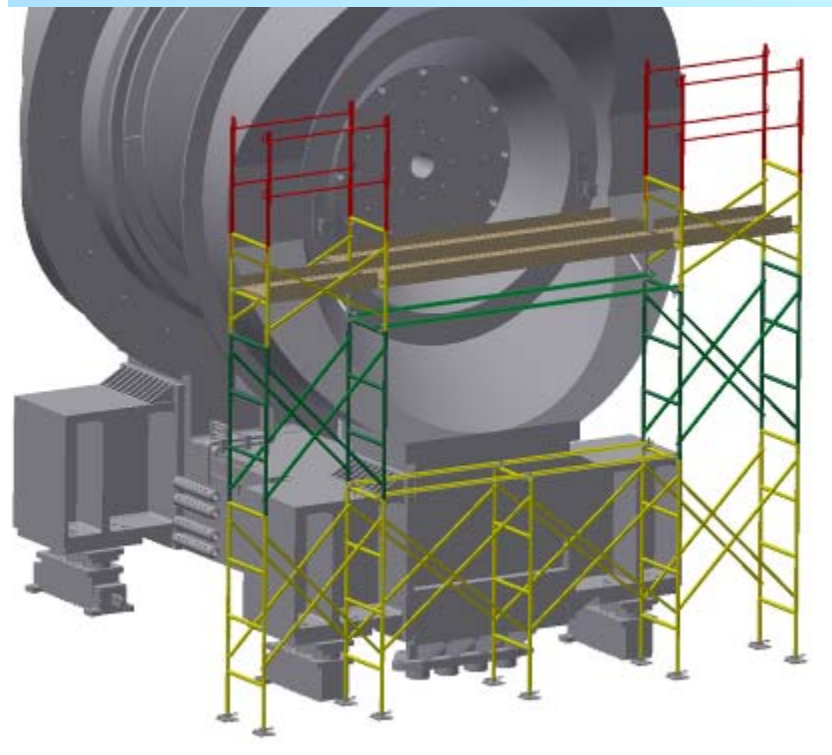
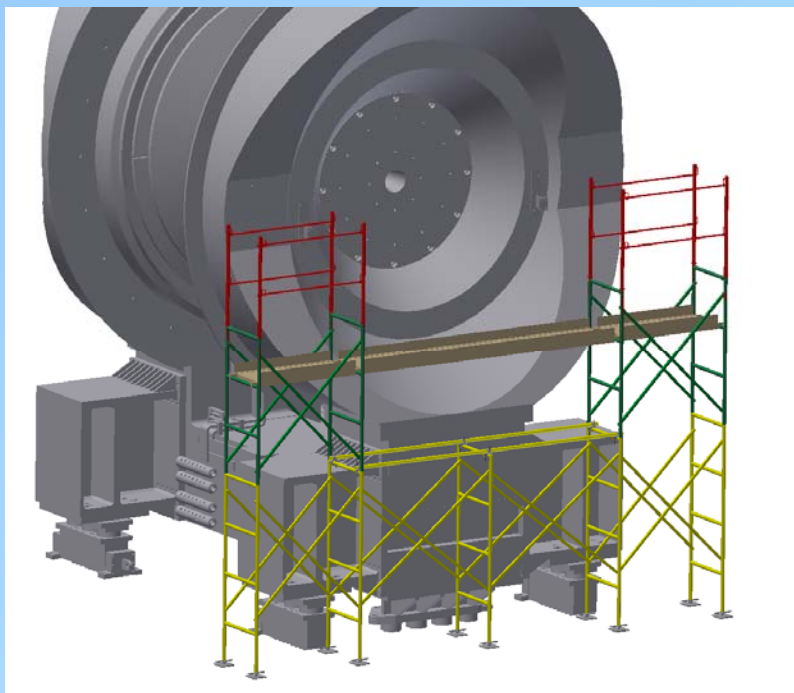
Work Permits for Shutdown 2011

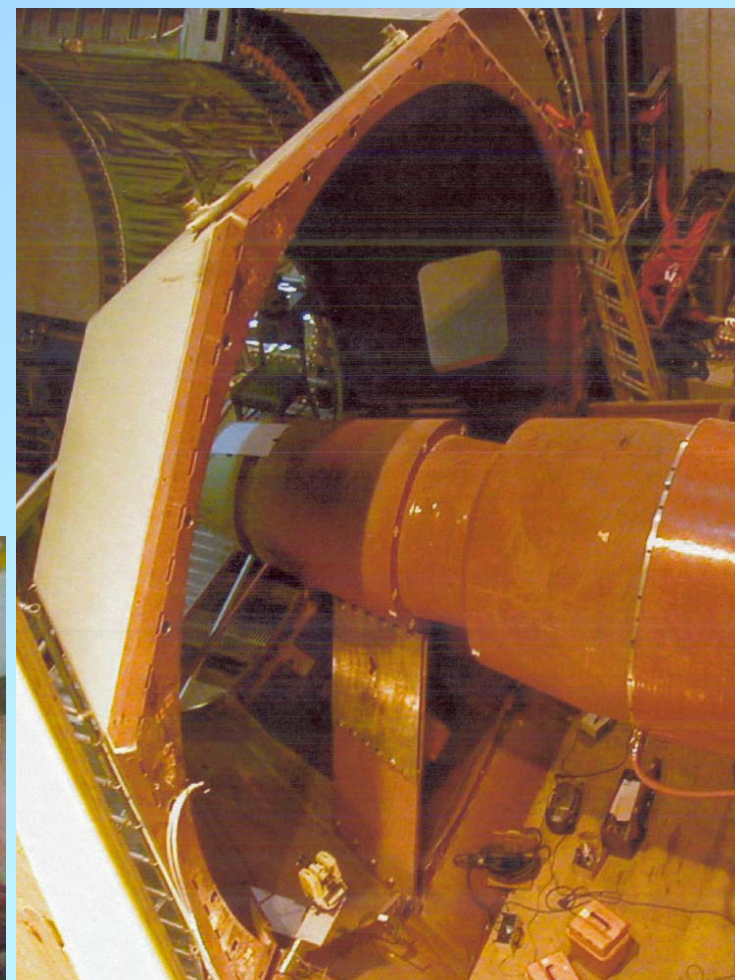
TECHNICAL SUPPORT NO. 1

- Start of Shutdown - Done
- VTX Removal/FVTX/VTX Installation - Done
- RPC1 Prototype and proto absorber removal - Done
- MuTr Maintenance and Upgrade (3 WP's Separate WP's for MMN and MMS access) - Done
- RPC1 Installation
- PC1 - Done
- BBC Removal/Maintenance/Re-installation - Done
- End of Shutdown

No need to involve bargaining unit.

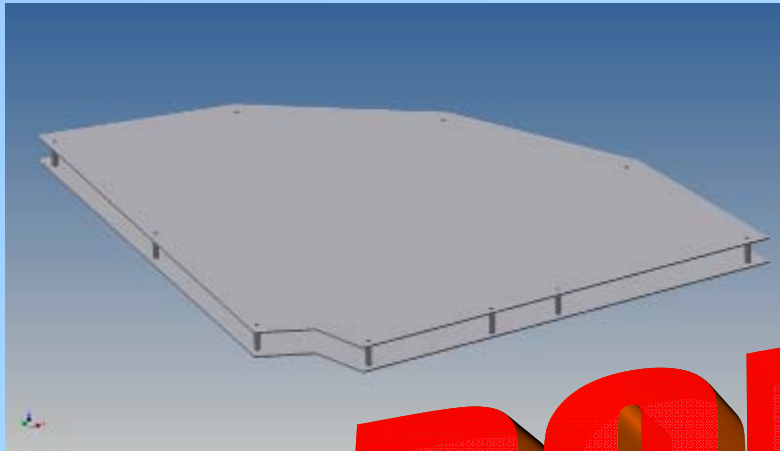






Station 2 access (MMS shown
MMN is similar)

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DONE

Dummy MuTr Station 1 Octant. Will be used to re-qualify vacuum lifting fixture and to practice using vacuum lifting fixture prior to removing station 1 north octants.

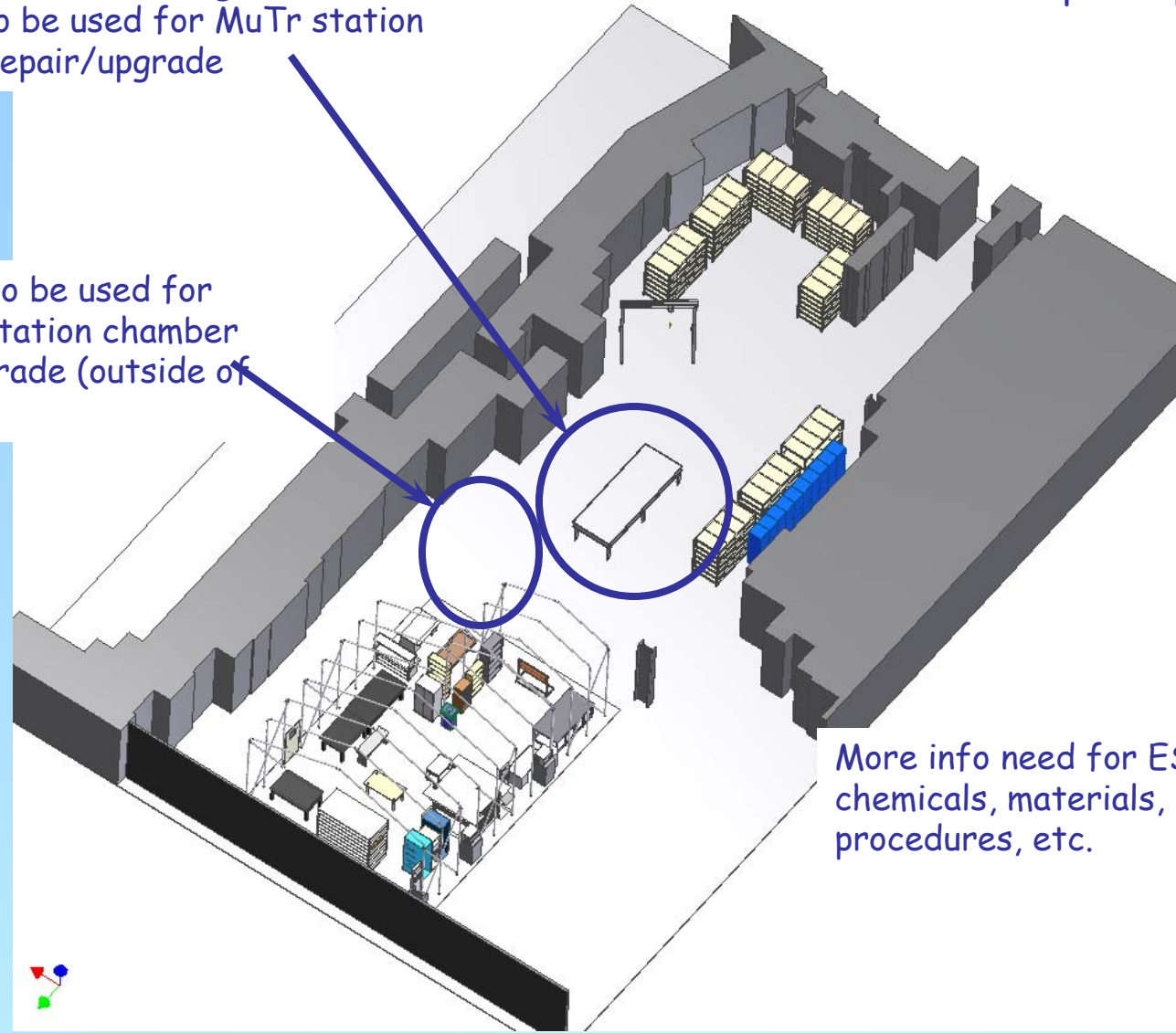


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This area (previously occupied by burn-in test stand and enclosing tent, now just tent) to be used for MuTr station 1 chamber repair/upgrade

This area to be used for soldering station chamber repair/upgrade (outside of tents)

RPC Factory site to be utilized by both RPC1 fabrication/testing and MuTr station 1 chamber repair/upgrade



More info need for ESRC: chemicals, materials, methods and procedures, etc.

AH and IR Crane Corrective Actions



IR Crane 1 ton replacement parts received. Paul and Mike R. planning for upgrade work, test complete



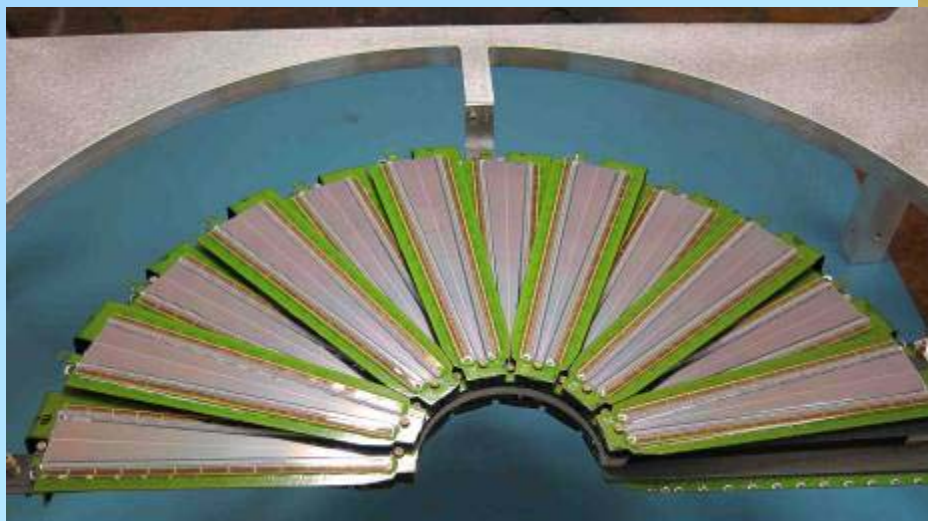
AH Crane:

Expect 10 ton crane to be back in service ASAP, ??

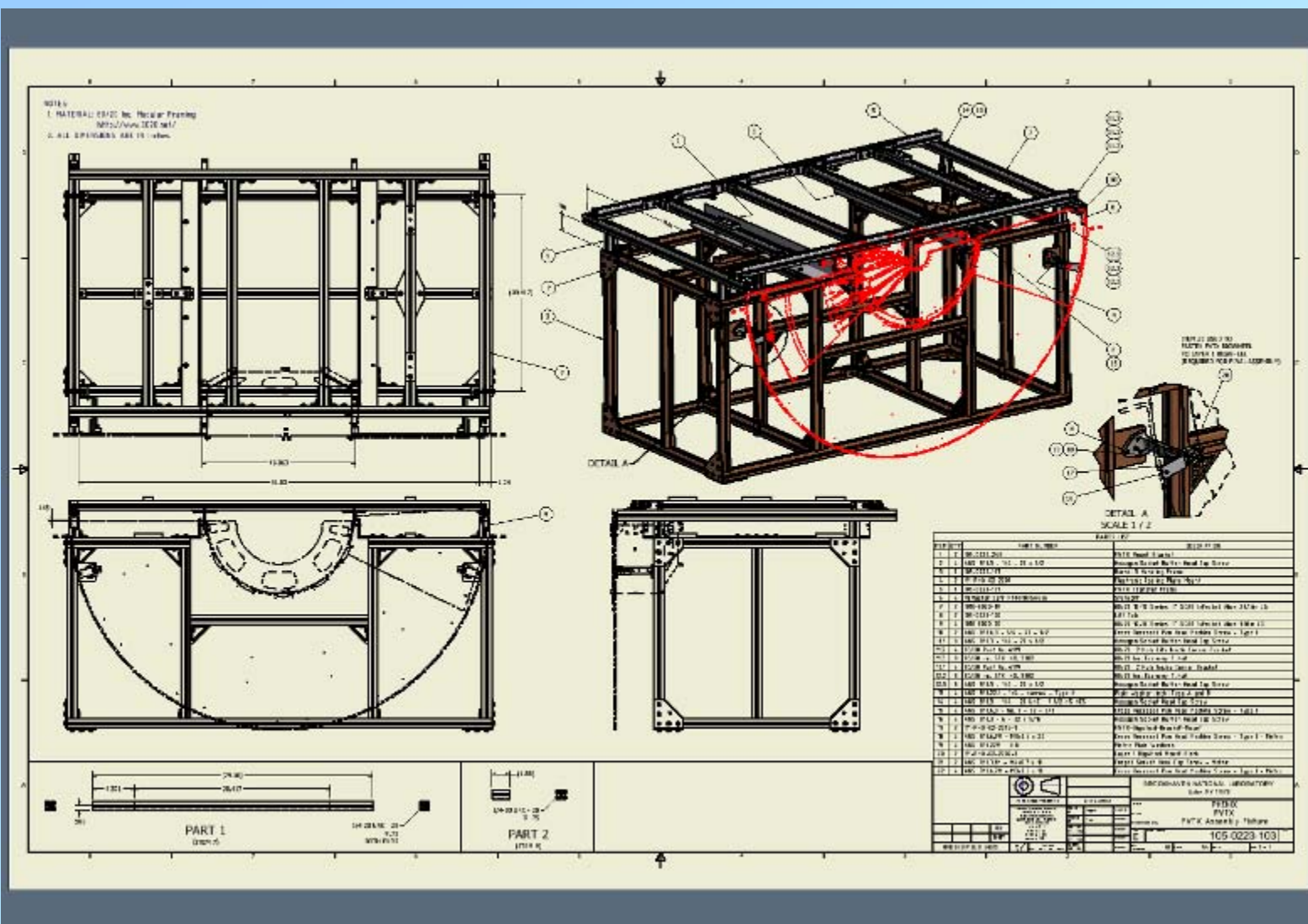
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FVTX /VTX Assembly & Integration

TECHNICAL SUPPORT

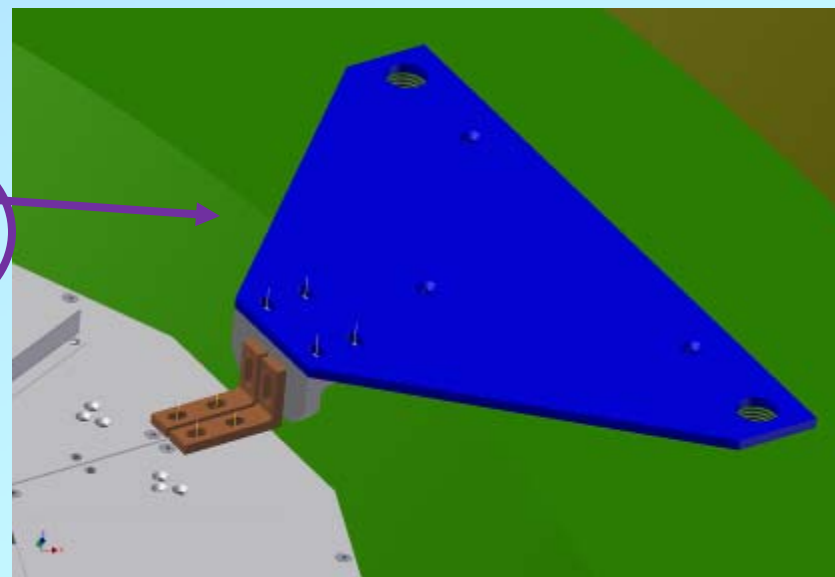
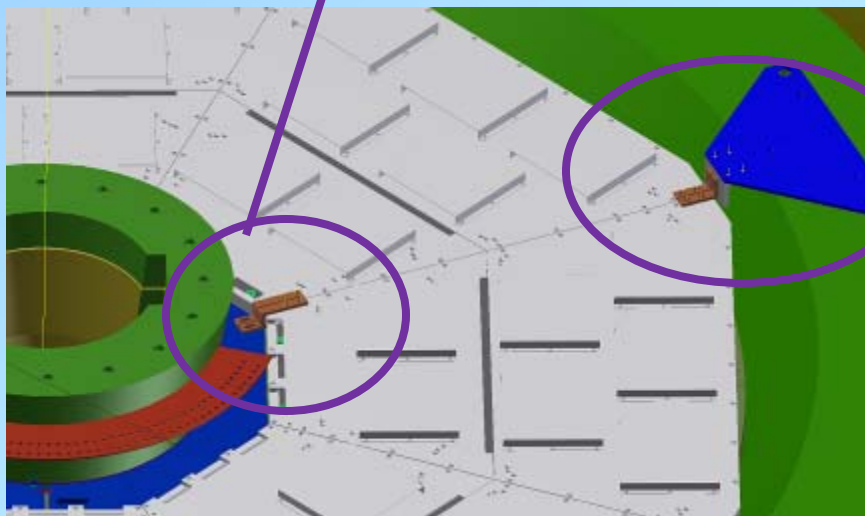
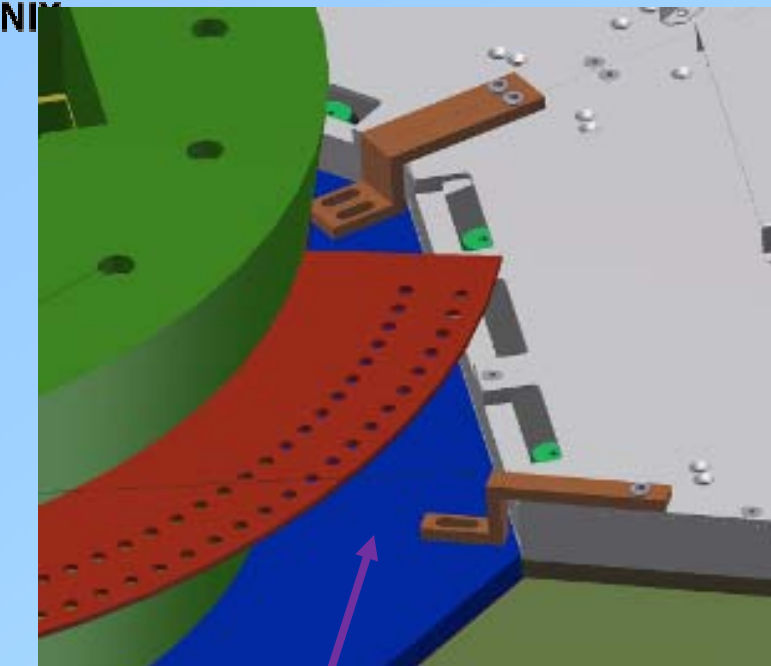


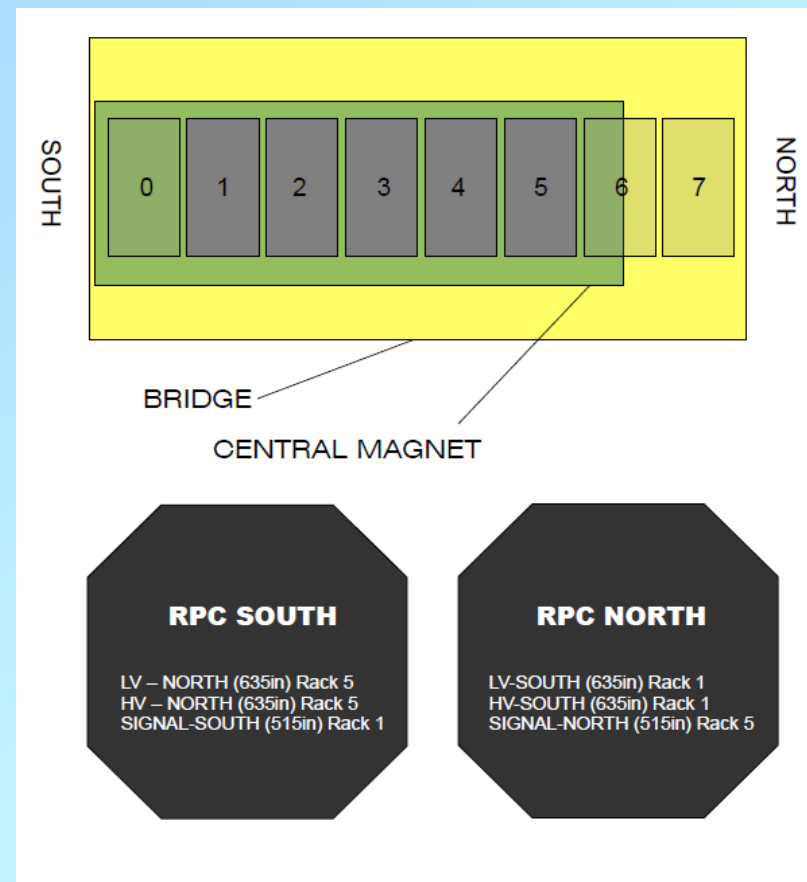
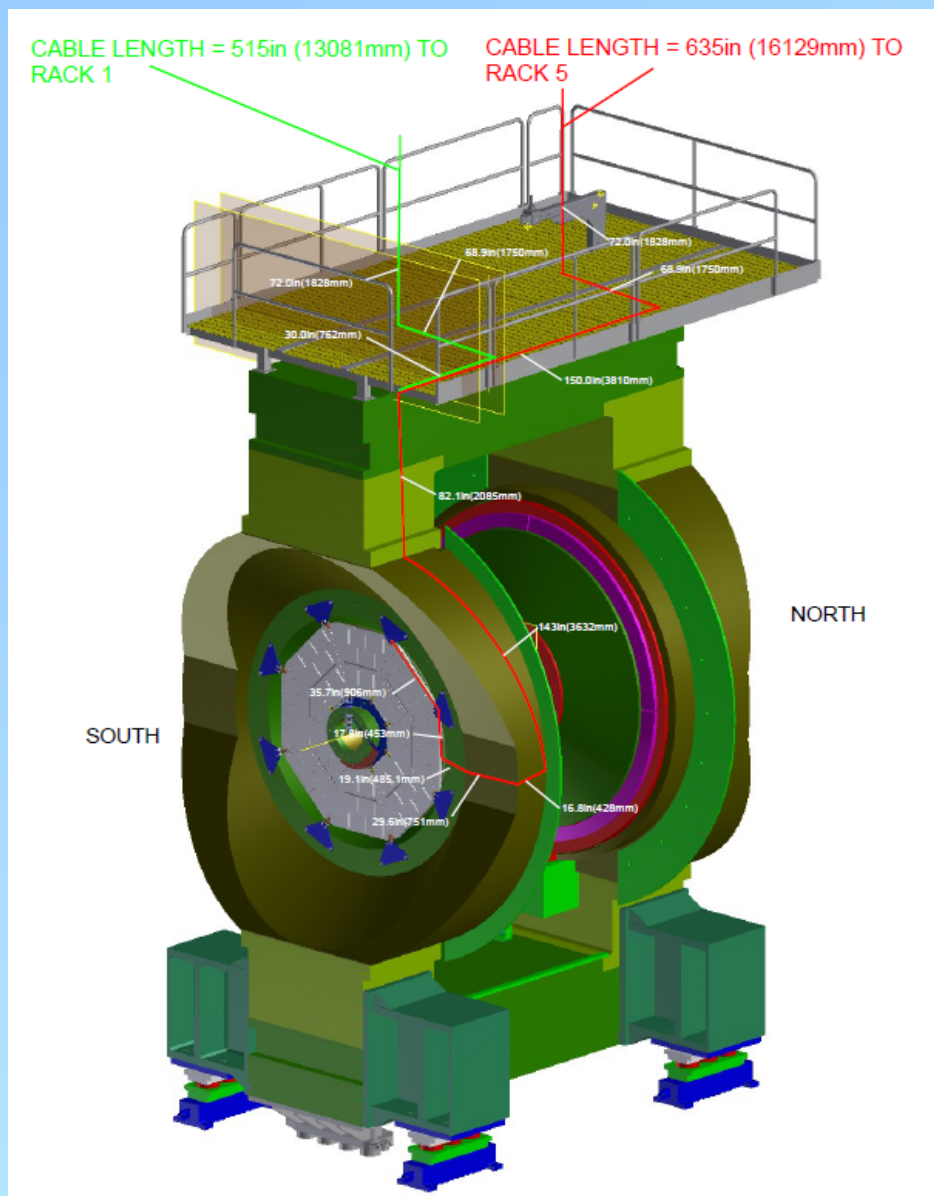
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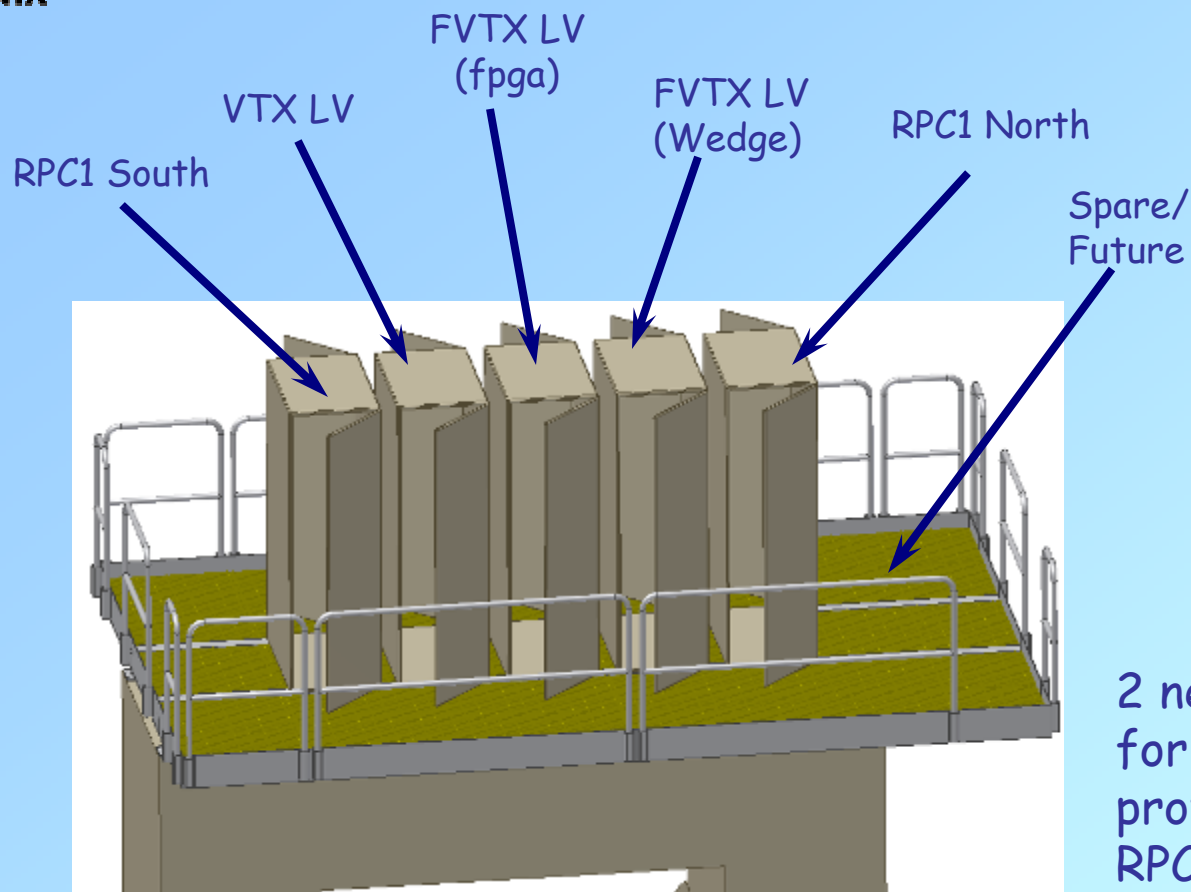


RPC1 Mounting Concept

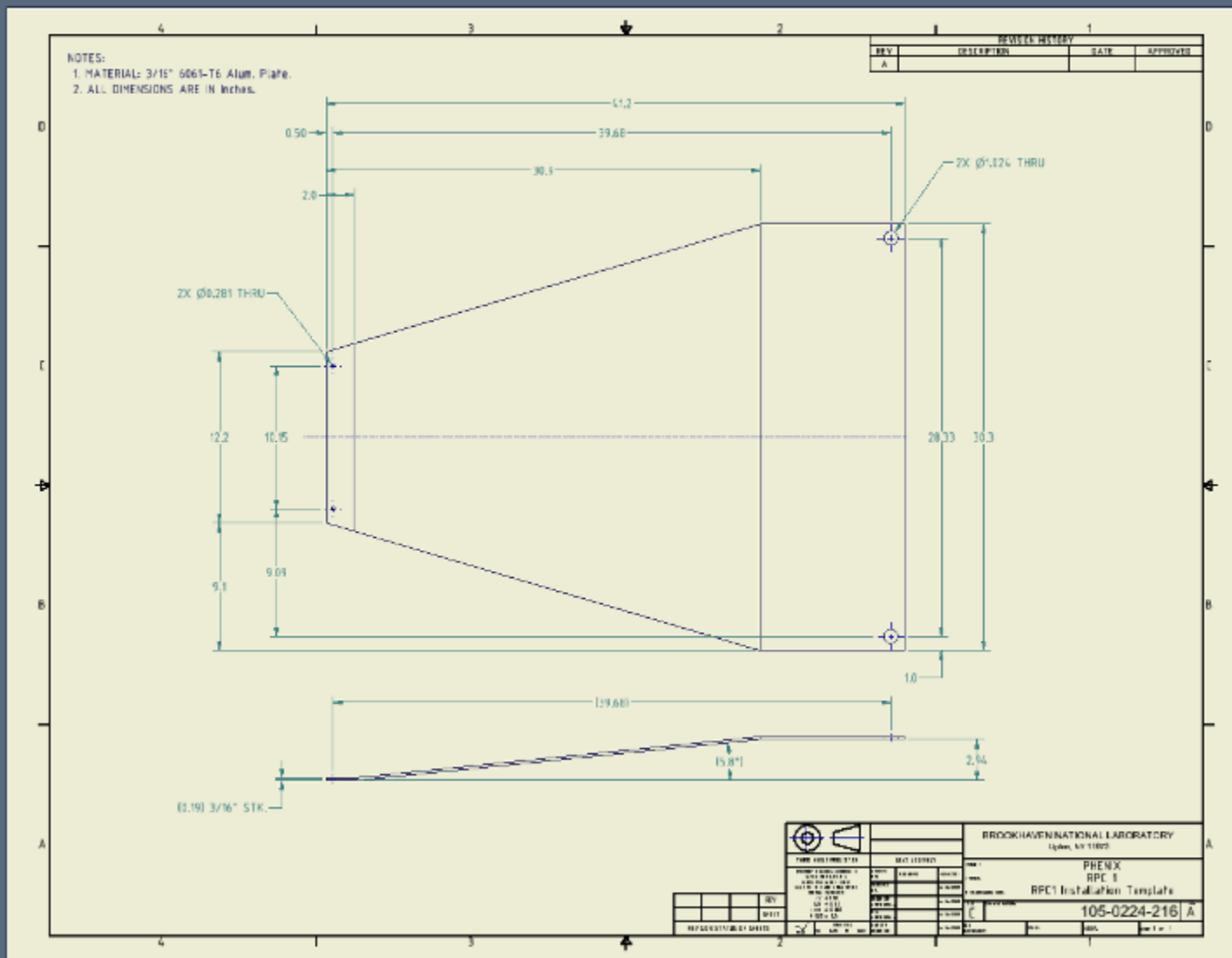
Octants are individually mounted then tied together and supported at the outer octant boundaries by brackets mounted on existing tapped holes, and on inner edges by rings which wedge against the flower pot lead liner. Tapped holes in 8 places on each octant are used both to mount the absorber section and to attach the mounting brackets.







2 new racks to be added for FVTX, 1 new and prototype upgraded for RPC1. All racks will be equipped with standard PHENIX heat, smoke and water leak detection.



2010 Building Maintenance Issues

- Roof leaks in utility bathroom at northwest corner behind tech offices, over door between rack room and assembly hall, over door between control room and elect. ass'y room, southeast corner of IR and laser room.
- Flooding in AH/ Driveway heaving
- Electronics test/assembly room-to-parking lot door (does not open/close/lock properly - needs to be replaced)
- Temperature in utility hall (where new air compressor is installed) is exceedingly high (transformer cases as high as 135 F)



PHENIX Procedure Review Current Status:

147 Procedures Identified

- 87 Made Inactive (not currently in use, will require revision to re- activate if and when necessary, available for reference purposes)
- 9 CAD procedures relevant to PHENIX, all are up to date and available on the CAD web site
- 43 PHENIX approved procedures.
all are current and up-to-date
- 9 Proposed/Draft Procedures (never previously formalized) (3 are ready for review) These will be addressed during next few months.

Web retrieval of latest procedures now available from PHENIX Internal:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_procedures.htm

All active Procedures are up to date through the end of 2011.

CAD ESRC Safety Review Action Items:

- Provide the latest schematics of the new FVTX readout boards to assure compliance with the agreement on fusing (Boose July 30, 2011)
- Review all new power supplies are NRTL equivalent compliant and affix respective labels (Giannotti July 30, 2011)
- Provide the new flammable gases leak rates for the new and re-installed systems as part of the PHENIX turn on plans (Pisani Dec 15, 2011)
- Assure security/ malware protection of the computing used to download the PLC systems (Haggerty-Giannotti July 30, 2011)
-
- Provide details of the chemicals to be used in the repair of the Muon Tracking chambers (Lynch July 15, 2011) - Done
- Review and approve any conformal coating and chemical treatments for Muon Tracking chamber repair (Lynch-Cirigliaro July 15, 2011) - under review
- Load test and certify the Muon Tracking Lifting fixture (Lynch-Gaffney July 15, 2011)
- Done
- Review and approve the proposed scaffolding (Lynch-Tuozzolo July 30, 2011)
- Submitted

Related items for this shutdown

- A plan for the RPC and Muon shielding upgrade inside the North and South Tunnels (Phillips)
- Better access to the PHENIX A/C systems in the IR (Phillips)

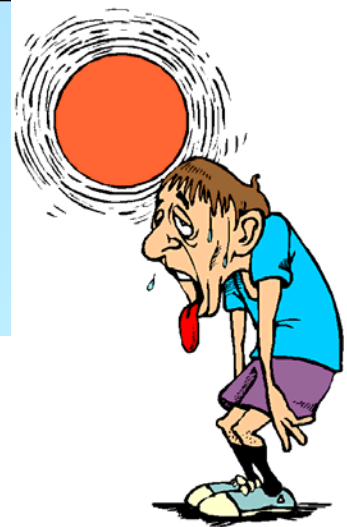
Training Update Sent out - most JTA's up to date except for a few fall protections.

Check you status and try to get req'd trainings up to date before you need to do work requiring that training.

Check with me if you have questions.

Where To Find PHENIX Engineering Info

Heat Wave is here - Stay Cool



Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm

